

CLMPTO

11/15/04

CM.

[CLAIM 1]

A fluorescent lamp comprising:

a red color phosphor having a maximum luminous wavelength within the range of about 600 to 620nm;

a green color phosphor having a maximum luminous wavelength within the range of about 520 to 555nm; and

a blue color phosphor having a maximum luminous wavelength within the range of about 440 to 460nm, wherein said green color phosphor has only one maximum luminous peak corresponding to the luminous wavelength range of about 520 to 555nm.

[CLAIM 2]

The fluorescent lamp as claimed in claim 1, wherein said green color phosphor is formed by $Zn_2SiO_4:Mn^{2+}$ with Mn^{2+} as an activator.

[CLAIM 3]

The fluorescent lamp as claimed in claim 1, wherein said blue color phosphor has a luminous spectral distribution of a line shape.

[CLAIM 4]

The fluorescent lamp as claimed in claim 3, wherein said blue color phosphor has a luminous spectral distribution which half band width is about 40nm or narrower.

[CLAIM 5]

The fluorescent lamp as claimed in claim 3, wherein said blue color phosphor is formed by one selected from the groups of $\text{Sr}_{10}(\text{PO}_4)_6\text{Cl}_2:\text{Eu}^{2+}$, $(\text{Sr,Ca})_{10}(\text{PO}_4)_6\text{Cl}_2:\text{Eu}^{3+}$ and $(\text{Sr,Ca})_{10}(\text{PO}_4)_6\text{nB}_2\text{O}_3:\text{Eu}^{2+}$.

CLAIMS 6-13. (CANCELLED)

[CLAIM 14]

A fluorescent lamp comprising:

a red color phosphor having a maximum luminous wavelength within the range of about 600 to 620nm;

a green color phosphor having a maximum luminous wavelength within the range of about 520 to 555nm; and

a blue color phosphor having a maximum luminous wavelength within the range of about 440 to 460nm, wherein said blue phosphor has a luminous spectral distribution of a line shape

[CLAIM 15]

The fluorescent lamp as claimed in claim 14, wherein said blue color phosphor has a luminous spectral distribution which a half bandwidth is about 40nm or narrower.

[CLAIM 16]

The fluorescent lamp as claimed in claim 14, wherein said blue color phosphor is formed by one selected from the groups of $\text{Sr}_{10}(\text{PO}_4)_6\text{Cl}_2:\text{Eu}^{2+}$, $(\text{Sr,Ca})_{10}(\text{PO}_4)_6\text{Cl}_2:\text{Eu}^{3+}$ and $(\text{Sr,Ca})_{10}(\text{PO}_4)_6\text{nB}_2\text{O}_3:\text{Eu}^{2+}$.

[CLAIM 17]

A liquid crystal display device having a fluorescent lamp comprising:
a red color phosphor having a maximum luminous wavelength within the range of about 600 to 620nm, a green color phosphor having a maximum luminous wavelength within the range of about 520 to 555nm, and a blue color phosphor having a maximum luminous wavelength within the range of about 440 to 460nm , wherein said green color phosphor has only one maximum luminous peak corresponding to the maximum luminous wavelength of about 520 to 555nm.

[CLAIM 18]

The liquid crystal display device as claimed in claim 17, wherein said blue color phosphor of said fluorescent lamp has a luminous spectral distribution of a line shape.

CLAIMS 19-21. (CANCELLED)

[CLAIM 22]

A liquid crystal display device comprising:
a red color phosphor having a maximum luminous wavelength within the range of about 600 to 620nm, a green color phosphor having a maximum luminous wavelength within the range of about 520 to 555nm, and a blue color phosphor having a maximum luminous wavelength within the range of about 440 to 460nm, wherein said blue color phosphor has a luminous spectral distribution of a line shape.

[CLAIM 23]

The liquid crystal display device as claimed in claim 22, wherein said blue color phosphor of said fluorescent lamp has a luminous spectral distribution which half band width is about 40nm or narrower.